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EXAMINER	
ZUNIGA, JACKIE	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/580,178	YOKOTA ET AL.	
	Examiner	Art Unit	
	JACKIE ZUNIGA	4143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/22/2006; 06/26/2006; 01/06/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-21 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 05/22/2006, 06/26/2006 and 01/06/2009 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 15 and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

5. Claim 15, directed toward a "program", is non-statutory because it appears that the claim is directed toward only functional descriptive material (i.e. software, per se), because the recited software product is not defined as being stored on a computer-readable medium (see MPEP 2106.01(I)). The Examiner suggests amending the preamble of the claim to include language of "a computer-readable storage medium

having a program stored thereon, that when executed by a processor...", provided such language is supported by the specification.

Claim 16 is directed towards non-statutory subject matter because it recites, 'a computer readable recording medium' and the specification fails to clearly describe the computer readable recording medium, which may contain carrier waves or signals. The recited program is not defined as being stored on a computer-readable storage medium (see MPEP 2106.01(I)). The Examiner suggests amending the preamble of the claims to include language of "a computer-readable storage medium having a program stored thereon, that when executed by a processor...", provided such language is supported by the specification.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims refer to 'index information'. However, the application

remains silent about which information is stored in this index. The nature of the index is not defined. An index in general can comprise a tree structure, hash values, symbols in plain text and more. Accordingly, the uses and requirements for accessing its content or the content which is indexed are therefore varying. A skilled person could not determine, based on the contents of the description, how an implementation of an index is to be carried out, neither is it defined in the present application. An embodiment of a device key index is also missing.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 1-3, 5-12, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (hereinafter Nakano), U.S. Publication No. 2003/0081792. Nakano is cited by applicant in IDS filed 5/22/2006.**

10. **As per claim 1,** Nakano discloses: A content reproduction apparatus which reproduces digital contents [paragraph 0002, 0005, content reproduction], comprising

A secret information storage unit operable to hold secret information specific to the content reproduction apparatus in a manner which does not allow access from outside the content reproduction apparatus [fig. 8, paragraphs 0009, 0026, lines 9-12, 0094, device key storage unit that stores key information];

An index information storage unit operable to hold index information which is in a one-to-one association with the secret information [fig. 2, 8, paragraphs 0009, 0026, 0094, 0135, 0136, 0176, encrypted media keys are generated in the key information generation unit 107, using the device key and media key, organization stores key information which includes list of encrypted media keys corresponding to device keys];

An index information output unit operable to output the index information stored in the index information storage unit to outside based on the instruction [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

Nakano does not explicitly disclose instructions to output the index information. However, Nakano discloses key management apparatus 100 achieves its functions in accordance with computer program stored in RAM or the hard disk [fig. 13, paragraphs 0099, 0245].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

11. **As per claim 2**, Nakano discloses:

Wherein the index information stored in the index information storage unit is encrypted according to a predetermined cryptographic method [fig. 2, paragraph 0009, 0026, 0176, 0178, key information generation unit 107 generates an encrypted media key];

The index information output unit includes:

A decryption unit operable to decrypt, based on the instruction, the encrypted index information stored in the index information storage unit according to the predetermined cryptographic method [paragraphs 0026, 0179, a decryption unit operable to generate a media key from an encrypted media key];

An output unit operable to output the index information decrypted by the decryption unit to outside [fig. 8, paragraph 0204, decryption unit 302 outputs the generated decrypted media key].

12. **As per claim 3**, Nakano discloses:

Wherein the index information stored in the index information storage unit is encrypted according to a predetermined cryptographic method [fig. 2, paragraph 0009, 0026, 0176, 0178, key information generation unit 107 generates an encrypted media key];

The index information output unit outputs, based on the instruction, the encrypted index information stored in the index information storage unit to outside [fig. 2,

paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

13. **As per claim 5,** Nakano discloses:

The index information output unit outputs the index information stored in the index information storage unit to outside [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

Nakano does not explicitly disclose:

Wherein the instruction receiving unit reads a program for executing the instruction from a removable recording medium on which the program is recorded; and the outputting of index information by executing the program.

However Nakano discloses a recording medium containing the key management program, and that the key management apparatus will achieve its functions by processing computer programs [paragraph 0025, 0099, 0192, 0214, 0596, 0599].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

14. **As per claim 6**, Nakano discloses:

Wherein on the recording medium, a unique identification number is recorded [paragraph 0009, organization assigns recording apparatus with a device key identification number];

The instruction receiving unit reads the program and the identification number from the removable recording medium on which the program is recorded [paragraphs 0009, 0025, 0099, 0595, recording medium is loaded and the apparatus extracts encrypted media key corresponding to the key identification number, and the key management program recorded to assist the key management apparatus achieve its function];

The index information output unit outputs, to outside, the index information stored in the index information storage unit, by executing the read program only when the identification number satisfies a predetermined condition [paragraph 0009, apparatus will extract the encrypted media key corresponding to the identification number assigned to the apparatus].

15. **As per claim 7**, Nakano discloses:

Wherein the instruction receiving unit is a communication terminal connected to a computer network [fig. 1, paragraph 0597, 0599, recording or reproduction apparatus may be connected to the key management apparatus via a network or the like].

16. **As per claim 8,** Nakano does not explicitly disclose:

Wherein the instruction receiving unit is a debug terminal used for connecting a debug apparatus to the content reproduction apparatus, the debug apparatus being used during development of the content reproduction apparatus.

However Nakano discloses a need for a system that will efficiently determine key assignment for the user apparatus for the content reproduction [paragraphs 0024, 0025, 0026].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to assume that efficiency may include utilizing a debug terminal to avoid any errors; hence an ordinary skilled artisan would find using a debug terminal obvious.

17. **As per claim 9,** Nakano does not explicitly disclose:

A display unit operable to display the index information.

However Nakano discloses a key management apparatus that includes a display for displaying information to the user [paragraph 0099].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to display index information because Nakano discloses a key management apparatus that includes a display. It is well known that displays are used for displaying information to the user; hence an ordinary skilled artisan would find displaying index information obvious.

18. **As per claim 10,** Nakano discloses:

Wherein the index information stored in the index information storage unit is encrypted according to a predetermined cryptographic method [paragraph 0009, 0026, 0176, 0178, apparatus encrypts media keys using device keys to generate encrypted media keys];

Nakano does not explicitly disclose:

The display unit displays the encrypted index information.

However Nakano discloses a key management apparatus that includes a display for displaying information to the user [paragraph 0099].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to display encrypted index information because Nakano discloses a key management apparatus that includes a display. It is well known that displays are used for displaying information to the user; hence an ordinary skilled artisan would find displaying encrypted index information obvious.

19. **As per claim 11,** Nakano discloses: a content reproduction apparatus which reproduces digital contents [paragraph 0002, 0005, content reproduction], comprising:

A secret information storage unit operable to hold secret information specific to the content reproduction apparatus in a manner which does not allow access from outside the content reproduction apparatus [fig. 8, paragraphs 0009, 0026, lines 9-12, 0094, device key storage unit that stores key information];

An index information storage unit operable to hold index information which is in a one-to-one association with the secret information [fig. 2, 8, paragraphs 0009, 0026,

0094, 0135, 0136, 0176, encrypted media keys are generated in the key information generation unit 107, using the device key and media key];

Nakano does not explicitly disclose:

A display unit operable to display the index information.

However Nakano discloses a key management apparatus that includes a display for displaying information to the user [paragraph 0099].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to display index information because Nakano discloses a key management apparatus that includes a display. It is well known that displays are used for displaying information to the user; hence an ordinary skilled artisan would find displaying index information obvious.

20. **As per claim 12,** Nakano discloses:

Wherein the index information stored in the index information storage unit is encrypted according to a predetermined cryptographic method [paragraph 0009, 0026, 0176, 0178, apparatus encrypts media keys using device keys to generate encrypted media keys];

Nakano does not explicitly disclose:

A display unit displays the encrypted index information

However Nakano discloses a key management apparatus that includes a display for displaying information to the user [paragraph 0099].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to display encrypted index information because Nakano discloses a key management apparatus that includes a display. It is well known that displays are used for displaying information to the user; hence an ordinary skilled artisan would find displaying encrypted index information obvious.

21. **As per claim 14,** Nakano discloses: an index information output method for outputting index information [fig. 2, 8, paragraph 0199] which is in a one-to-one association with secret information specific to a content reproduction apparatus [fig. 2, 8, paragraphs 0009, 0026, 0094, 0135, 0136, 0176, encrypted media keys are generated in the key information generation unit 107, using the device key and media key, organization stores key information which includes list of encrypted media keys corresponding to device keys] and is stored in the content reproduction apparatus which reproduces digital contents [fig. 2, key information generation unit 107, inside the key management apparatus 100, generates encrypted media key for content reproduction], the method comprising:

Outputting the index information to outside the content reproduction apparatus [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

Nakano does not explicitly disclose instructions to output the index information. However, Nakano discloses key management apparatus 100 achieves its functions in

accordance with computer program stored in RAM or the hard disk [fig. 13, paragraphs 0099, 0245].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

22. **As per claim 15,** Nakano discloses: a program for outputting index information which is in a one-to-one association with secret information specific to a content reproduction apparatus [fig. 2, paragraphs 0099, 0179, key information generation unit 107 outputs the generated encrypted media key], and is stored in the content reproduction apparatus which reproduces digital contents [paragraph 0002, 0005, content reproduction], the program causing a computer to execute:

Outputting the index information to outside the content reproduction apparatus [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

Nakano does not explicitly disclose instructions to output the index information. However, Nakano discloses key management apparatus 100 achieves its functions in accordance with computer program stored in RAM or the hard disk [fig. 13, paragraphs 0099, 0245].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer

program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

23. **As per claim 16,** Nakano discloses: a computer readable recording medium on which a program is recorded [paragraph 0025, 0099, 0192, 0214, 0596, 0599, a recording medium containing the key management program, and that the key management apparatus will achieve its functions by processing computer programs], the program being for outputting index information which is in a one-to-one association with secret information specific to a content reproduction apparatus [fig. 2, 8, paragraphs 0009, 0026, 0094, 0135, 0136, 0176, encrypted media keys are generated in the key information generation unit 107, using the device key and media key, organization stores key information which includes list of encrypted media keys corresponding to device keys], and is stored in the content reproduction apparatus which reproduces digital contents [paragraph 0002, 0005, content reproduction], the program causing a computer to execute:

Outputting the index information to outside the content reproduction apparatus [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key].

Nakano does not explicitly disclose instructions to output the index information. However, Nakano discloses key management apparatus 100 achieves its functions in accordance with computer program stored in RAM or the hard disk [fig. 13, paragraphs 0099, 0245].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

24. **Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (hereinafter Nakano), U.S. Publication No. 2003/0081792, in view of Ishibashi, U.S. Publication No. 2001/0021255.**

25. **As per claim 4,** Nakano does not explicitly disclose:

An authentication data storage unit operable to hold authentication data that is obtained by performing a predetermined conversion on the index information.

However Ishibashi discloses:

An authentication data storage unit operable to hold authentication data that is obtained by performing a predetermined conversion on the index information [fig. 4, paragraph 0006, 0010, 0036, 0038, 0041, lines 21-23, authentication is performed by installer 401 by using the device key and corresponding media key].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the method described in Nakano by implementing authentication data by using index information as disclosed by Ishibashi because it would provide Nakano's method with the enhanced capability of allowing contents of the

same recording medium to be reproduced even when the medium Is used by another personal computer or electronic apparatus [Ishibashi, paragraph 0023].

26. **As per claim 13,** Nakano discloses: a content reproduction system which reproduces digital contents [paragraph 0002, 0005, content reproduction], comprising

A secret information storage unit operable to hold secret information specific to the content reproduction apparatus in a manner which does not allow access from outside of the content reproduction apparatus [fig. 8, paragraphs 0009, 0026, lines 9-12, 0094, device key storage unit that stores key information];

An index information storage unit operable to hold index information which is in a one-to-one association with the secret information [fig. 2, 8, paragraphs 0009, 0026, 0094, 0135, 0136, 0176, encrypted media keys are generated in the key information generation unit 107, using the device key and media key, organization stores key information which includes list of encrypted media keys corresponding to device keys];

An instruction receiving unit operable to receive an instruction to output the index information [paragraph 0099, apparatus 100 achieves its functions in accordance with computer program stored in RAM or the hard disk];

An index information output unit operable to output, based on the instruction, the index information stored in the index information storage unit [fig. 2, paragraph 0179, key information generation unit 107 outputs the generated encrypted media key];

Nakano does not explicitly disclose instructions to output the index information. However, Nakano discloses key management apparatus 100 achieves its functions in

accordance with computer program stored in RAM or the hard disk [fig. 13, paragraphs 0099, 0245].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to receive instructions because Nakano discloses a computer program. It is well known that computer programs are necessary to control the output; hence an ordinary skilled artisan would find computer instructions obvious.

Nakano does not explicitly disclose:

A user authentication server which performs user authentication;

A user authentication unit operable to perform user authentication based on the user identification information received from the content reproduction apparatus.

However Ishibashi discloses:

A user authentication server which performs user authentication [fig. 4, paragraph 0051, installer 401 performs authentication process with information received by the web server];

A user authentication unit operable to perform user authentication based on the user identification information received from the content reproduction apparatus [paragraph 0006, 0010, 0028, authentication will be performed by analyzing identification information received from the user's device];

A user identification information transmission unit operable to transmit user identification information to the user authentication server [fig. 4, paragraph 0051, installer 401 performs authentication process with information received by the web server].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the method described in Nakano by implementing authentication server and unit that perform authentication as disclosed by Ishibashi because it would provide Nakano's method with the enhanced capability of allowing contents of the same recording medium to be reproduced even when the medium Is used by another personal computer or electronic apparatus [Ishibashi, paragraph 0023].

Prior Art

27. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

28. Asano et al., U.S. Publication No. 2004/0030902 discloses a recording apparatus capable of executing accurate and efficient control based on copyright information.

29. Chen, U.S, Patent No. 6,058,187 discloses an encryption system that uses a translator for performing encryption functions [col. 1, lines 5-8, col. 2, lines 26-29].

30. Asano et al., U.S. Patent No. 6,944,763 discloses a data transmitting unit for generating a cipher key on the basis of first information shared in secret [col. 2, lines 43-46].

31. Shirai et al., U.S. Publication No. 2004/0128252 discloses an information processing device for transmitting encrypted content [paragraph 0013].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACKIE ZUNIGA whose telephone number is (571)270-7194. The examiner can normally be reached on Monday - Friday 7:30 A.M to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on (571)272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.Z./
Examiner, Art Unit 4143
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